IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A node search method for searching for a plurality of new service [[node]] nodes for providing a service services to a mobile node, in a mobile communication system including a plurality of service nodes and the mobile node, each of the service nodes and the mobile node having a node storage unit configured to store addresses of service nodes, the node search method comprising:

transmitting a node search packet to search for the plurality of new service [[node]] nodes from a search node, which searches for the plurality of new service [[node]] nodes, to a search packet reception node having an address stored in the node storage unit of the search node;

transmitting a node notice request packet from the search packet reception node to each of a plurality of peripheral [[node]] nodes having an address addresses stored in the node storage unit of the search packet reception node, in response to receiving the node search packet, the address addresses of the plurality of peripheral [[node]] nodes not being stored in the node storage unit of the search node;

returning a node notice packet from the search packet reception node to the search node, in response to receiving the node search packet;

transmitting the node notice packet from each of the plurality of peripheral [[node]] nodes to the search node, based only on a determination that the node notice request packet has been received by the respective peripheral node;

detecting the plurality of new service [[node]] nodes based on the returned node notice packet packets from the plurality of peripheral [[node]] nodes, by the search node;

updating the node storage unit of the search node based on the plurality of new service [[node]] nodes detected by the search node; and

transmitting data for investigating node information from the search node to the

detected plurality of new service [[node]] nodes, the data for investigating node information

including a request for a delay value and a number of hops in a packet transmission between

the search node and the detected plurality of new service [[node]] nodes.

2. (Currently Amended) A node, comprising:

a node storage unit configured to store addresses of service nodes for providing a

service to a mobile node;

a search packet creation unit configured to create a node search packet to search for a

plurality of new service [[node]] nodes;

a communication unit configured to transmit the node search packet to a search packet

reception node having an address stored in the node storage unit, to receive a node notice

packet transmitted from the search packet reception node in response to receiving the node

search packet, and to receive the node notice packet from each of a plurality of peripheral

[[node]] nodes which receives a node notice request packet from the search packet reception

node, an address addresses of the plurality of peripheral [[node]] nodes not being stored in the

node storage unit and each of the plurality of peripheral [[node]] nodes being configured to

transmit the node notice packet to the node based only on a determination that the node notice

request packet has been received by the respective peripheral node;

a detection unit configured to detect the plurality of new service [[node]] nodes based

on the node notice [[packet]] packets returned from the plurality of peripheral node nodes;

and

an update unit configured to update the node storage unit based on the plurality of

new service [[node]] nodes detected by the detection unit,

wherein the communication unit is configured to transmit, to the detected plurality of

new service [[node]] nodes, data for investigating node information including a request for a

delay value and a number of hops in a packet transmission between the search node and the

plurality of detected new service [[node]] nodes.

3. (Currently Amended) The node of claim 2, further comprising:

a data creation unit configured to create the data for investigating node information

detected by the detection unit, the data being transmitted to the detected plurality of new

service [[node]] nodes, wherein

the node storage unit is configured to store the node information,

the communication unit is configured to transmit the data created by the data creation

unit, and to receive response data returned in response to the data by the detected plurality of

new service [[node]] nodes, and

the update unit is configured to update the node storage unit based on the returned

response data.

4. (Currently Amended) The node of claim 2, wherein

node information concerning the plurality of new service node is nodes are included

in the node notice [[packet]] packets,

the node storage unit is configured to store the node information, and

the update unit is configured to update the node storage unit based on the returned

node notice [[packet]] packets.

5. (Previously Presented) The node of claim 3, wherein the node storage unit is configured to store the addresses of the service nodes and the node information according to a predetermined criterion.

6. (Currently Amended) The node of claim 4, further comprising:

a determination unit configured to determine inter-node information between the search node and the plurality of peripheral node nodes according to inter-node information between the search node and the search packet reception node and inter-node information between the search packet reception node and the plurality of peripheral node nodes based on the node notice [[packet]] packets, wherein

the update unit is configured to update the node storage unit based on the inter-node information between the search node and the plurality of peripheral node nodes determined by the determination unit.

7. (Previously Presented) The node of claim 2, further comprising:

a notice packet creation unit configured to create the node notice packet by accessing the node storage unit, wherein

the communication unit is configured to transmit the node notice packet created by the notice packet creation unit.

8. (Currently Amended) The node of claim 7, wherein the notice packet creation unit is configured to create the node notice packet that is passed through the plurality of peripheral [[node]] nodes.

9. (Previously Presented) The node of claim 7, wherein the notice packet creation

unit is configured to create the node notice packet when the communication unit has received

at least one of the node search packet, the node notice packet, and the node notice request

packet for requesting return of the node notice packet.

10. (Currently Amended) The node of claim 2, further comprising:

a request packet creation unit configured to create the node notice request packet for

requesting the plurality of peripheral node nodes to return the node notice [[packet]] packets,

wherein

the communication unit is configured to transmit the node notice request packet

created by the request packet creation unit.

11. (Previously Presented) The node of claim 10, wherein the request packet creation

unit is configured to create the node notice request packet when the communication unit has

received at least one of the node search packet, the node notice packet, and the node notice

request packet.

12. (Previously Presented) The node of claim 2, further comprising:

a request packet creation unit configured to create a node registration request packet

for requesting registration in the node storage unit of another service node, wherein

the communication unit is configured transmit the node registration request packet

created by the request packet creation unit.

13. (Previously Presented) The node of claim 2, wherein

the communication unit is configured to receive a node registration request packet for

requesting registration in the node storage unit of another service node, and

the update unit is configured to update the node storage unit based on the node

registration request packet.

14. (Previously Presented) The node of claim 2, further comprising:

a selection criterion holding unit configured to hold a selection criterion for selecting

a service node to be used; and

a selection unit configured to access the node storage unit and to select the service

node to be used, based on the selection criterion held in the selection criterion holding unit.

15. (Currently Amended) A mobile communication system, comprising:

a search node configured to search for a plurality of new service [[node]] nodes for

providing a service services to a mobile node by transmitting a node search packet in order to

search for the plurality of new service [[node]] nodes;

a search packet reception node configured to receive the node search packet

transmitted from the search node; and

a plurality of peripheral [[node]] nodes other than the search packet reception node,

wherein the search node includes

a node storage unit configured to store addresses of service nodes;

a search packet creation unit configured to create the node search packet to

search for the plurality of new service [[node]] nodes;

a communication unit configured to transmit the node search packet to the

search packet reception node having an address stored in the node storage unit, to

receive a node notice packet transmitted from the search packet reception node in

response to receiving the node search packet, and to receive the node notice packet

from [[a]] each of the plurality of peripheral [[node]] nodes which receives a node

notice request packet from the search packet reception node, an address addresses of

the plurality of peripheral [[node]] nodes not being stored in the node storage unit and

each of the plurality of peripheral [[node]] nodes being configured to transmit the

node notice packet to the search node based only on a determination that the node

notice request packet has been received by the respective peripheral node;

a detection unit configured to detect the plurality of new service [[node]]

nodes based on the node notice packet packets returned from the plurality of

peripheral [[node]] nodes; and

an update unit configured to update the node storage unit based on the

plurality of new service [[node]] nodes detected by the detection unit,

wherein the communication unit is configured to transmit, to the detected

plurality of new service [[node]] nodes, data for investigating node information

including a request for a delay value and a number of hops in a packet transmission

between the search node and the detected plurality of new service [[node]] nodes.

16. (Currently Amended) A non-transitory computer-readable storage medium,

including computer executable instructions, wherein the instructions, when executed by a

processor, cause the processor to function as a node and to perform a method, comprising:

storing addresses of service nodes for providing a service to a mobile node;

creating a node search packet to search for a plurality of new service [[node]] nodes;

transmitting the node search packet to a search packet reception node having an

address stored in the storing step;

receiving a node notice packet transmitted from the search packet reception node in response to receiving the node search packet;

receiving the node notice packet from each of a plurality of peripheral [[node]] nodes which receives a node notice request packet from the search packet reception node, an address addresses of the plurality of peripheral [[node]] nodes not being stored in the node storage unit and each of the plurality of peripheral [[node]] nodes being configured to transmit the node notice packet to the node based only on a determination that the node notice request packet has been received by the respective peripheral node;

detecting the plurality of new service [[node]] nodes based on the node notice packet packets returned from the plurality of peripheral [[node]] nodes;

updating the addresses based on the detected plurality of new service [[node]] nodes; and

transmitting to the detected plurality of new service [[node]] nodes, by the search node, data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected plurality of new service [[node]] nodes.

17. (Currently Amended) The node search method of claim 1, wherein the updating step comprises updating the node storage unit to include an address the addresses of the plurality of new service [[node]] nodes.

18. (Currently Amended) The node of claim 2, wherein the update unit is configured to update the node storage unit to include an address the addresses of the plurality of new service [[node]] nodes.

19. (Currently Amended) The mobile communication system of claim 15, wherein the update unit is configured to update the node storage unit to include ~~an address~~ the addresses of the plurality of new service [[node]] nodes.

20. (Currently Amended) The non-transitory computer-readable storage medium of claim 16, wherein the updating step comprises updating the addresses to include ~~an address~~ the addresses of the plurality of new service [[node]] nodes.

21. (Currently Amended) The node search method of claim 1, wherein the transmitting step comprises transmitting the node notice packet from [[the]] one of the plurality of peripheral [[node]] nodes directly to the search node.

22. (Currently Amended) The node of claim 2, wherein the communication unit is configured to receive the node notice packet directly from [[the]] one of the plurality of peripheral [[node]] nodes.

23. (Currently Amended) The mobile communication system of claim 15, wherein the communication unit is configured to receive the node notice packet directly from [[the]] one of the plurality of peripheral [[node]] nodes.

24. (Currently Amended) The non-transitory computer-readable storage medium of claim 16, wherein the receiving step comprises receiving the node notice packet directly from [[the]] one of the plurality of peripheral [[node]] nodes.